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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,333	02/10/2004	Michael Moshman	077350.0136	1725

62965 7590 12/11/2009

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EXAMINER	
MERCIER, MELISSA S	

ART UNIT	PAPER NUMBER
1615	

NOTIFICATION DATE	DELIVERY MODE
12/11/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DLNYDOCKET@BAKERBOTTS.COM

Office Action Summary	Application No.	Applicant(s)	
	10/776,333	MOSHMAN ET AL.	
	Examiner	Art Unit	
	MELISSA S. MERCIER	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-36* is/are pending in the application.

4a) Of the above claim(s) *18-19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 4-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Summary

Receipt of Applicants Remarks and Amended Claims filed on July 30, 2009 is acknowledged. Claims 1-2 and 4-36 are pending in this application. Claims 18-19 remain withdrawn from consideration.

Withdrawn Rejections

Claim Rejections - 35 USC § 112

The rejection of claims 1-2, 4-17 and 21-23 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement has been withdrawn in view of Applicants arguments regarding

Maintained Rejections

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4-9, 12, 16-17, and 20-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Illum et al. (US Patent 6,387,917; hereinafter referred to as Illum).

Illum discloses a methane sulphonate salt of morphine and compositions thereof having medicinal uses, particularly for the treatment of pain and adapted for nasal delivery (abstract). Illum discloses the methane sulfonate salt of morphine is commonly termed mesylate (column 2, lines 31-35). The preferred composition comprises aqueous solutions in which the methane sulphonate salt is combined with chitosan to provide an increased absorption of the drug (column 2, lines 61-68). The morphine methane sulphonate liquid formulation will comprise 0.1mg/mL to about 600mg/mL morphine content (column 4, lines 20-24). The formulation may also be incorporate into formulations suitable for oral, buccal, rectal, or vaginal administration (column 4, lines 39-42). Illum's Examples 2-3 discloses a solution for intranasal administration comprising 8g morphine base (monohydrate), to which 2M methane sulphonic acid solution is stirred in, and 25mL of chitosan (column 5, line 33 through column 6, line 21). It is noted in claim 9, that Applicant has identified methane sulfonic acid as an antioxidant. The prior art teaches mixing morphine base monohydrate with methane sulphonic acid in which no additional method steps are performed, (i.e. heating, precipitation), then adding the chitosan solution. Therefore, Applicants is directed to their own specification on page 10-11, in which Applicant has used the same method steps as Illum, and would necessarily result in the conversation of the base monohydrate to the methane sulphonate salt of morphine. Example 2 additionally discloses a weight ratio of morphine (150mg/ml) to chitosan (5mg/ml) is 10:1, thereby meeting the claim limitations. As discussed above, the morphine can also be present in the amount of 0.1mg/ml to 600mg/ml; therefore, the skilled artisan would be able to

determine the optimal therapeutic benefit by optimizing the morphine to chitosan ratio based on the teachings of Illum.

The pH of the formulation is adjusted to a range of about 4-7 by adding additional methane sulfonic acid solution or an alkali (column 3, lines 36-40).

Illum further discloses the formulation can also contain other ingredients such as buffer systems, pH modifiers, anti-oxidants, stabilizing agents, anti-microbial agents, chelating agents, viscosity-enhancing agents, or other agents generally used in pharmaceutical formulations (column 4, lines 25-29).

Illum does not disclose the molecule to molecule ratio of morphine to chitosan recited in the instant claims. Illum does however disclose the same weight ratios recited in the instant claims, therefore, it is the position of the Examiner that since Illum discloses the same morphine and the same chitosan in the same weight ratios as recited in the instant claims, it would necessarily also meet the limitations of the molecule to molecule ratio, absent a showing of evidence to the contrary.

Furthermore the claims differ from the reference by reciting various concentrations of the active ingredient(s). However, the preparation of various transmucosal compositions having various amounts of the active agent and chitosan polymers is within the level of skill of one having ordinary skill in the art at the time of the invention. It has also been held that the mere selection of proportions and ranges is not patentable absent a showing of criticality. See In re Russell, 439 F.2d 1228 169 USPQ 426(CCPA 1971).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Illum et al. (US Patent 6,387,917) in view of Tulin-Silver et al. (US 5,508,282; hereinafter referred to as Tulin)

The teaching of Illum are discussed above and applied in the same manner.

While Illum discloses the use of antioxidant, however, Illum does not disclose the specific use of ascorbic acid or sodium ascorbate in the amount of 40-70% (w/v).

Tulin discloses compositions and methods for the treatment of rhinosinusitus comprising ascorbic acid in a nasal spray (abstract) in the amount of 15-300mg/ml (Table I).

It would have been obvious to one of ordinary skill to have incorporated the ascorbic acid of Tulin in the formulation of Illum since Tulin discloses it's useful for shortening the symptoms and duration of rhinitis or rhinosinusitis without side effects (column 3, lines 5-8).

Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Illum et al. (US Patent 6,387,917) in view of Grebow et al. (US Patent 5,026,825; hereinafter referred to as Grebow).

The teaching of Illum are discussed above and applied in the same manner.

While Illum discloses the use of antimicrobial agents, Illum does not disclose the use of benzalkonium chloride, disodium EDTA, sodium benzoate, and combinations thereof.

Grebow discloses an intranasal formulation comprising antimicrobial agents including benzalkonium chloride and disodium EDTA (Examples). They are present in the amount of 0.001-2.0% (w/v) (column 11, lines 55-63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have incorporated the specific antimicrobial agents of Grebow into the formulation of Illum since Grebow discloses they are suitable for use in nasal inhalant formulations.

Newly Applied Objections/Rejections

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: It is noted that claims 10-12 recite the amount of antioxidants present in a % weight/volume. However, after a review of the specification, the Examiner was unable to locate antecedent basis for such a limitation. The specification on pages 7-8 discusses the presence of the antioxidants in terms of mg/ml which is not equivalent to % weight/volume. Clarification and Correction is requested.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELISSA S. MERCIER whose telephone number is

(571)272-9039. The examiner can normally be reached on 8:00am-4:30pm Mon through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax can be reached on (571) 272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Melissa S Mercier/
Examiner, Art Unit 1615

/Robert A. Wax/
Supervisory Patent Examiner, Art Unit 1615